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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/003,040	11/02/2001	Gordon Good	13220.012001; P5847	1244

32615 7590 10/07/2005

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EXAMINER	
SHINGLES, KRISTIE D	

ART UNIT	PAPER NUMBER
2141	

DATE MAILED: 10/07/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/003,040	GOOD ET AL.	
	Examiner	Art Unit	
	Kristie Shingles	2141	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *18 May 2005*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-30* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-30* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 May 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to..See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

RD

DETAILED ACTION

Response to Amendment

Applicant has amended claims 1, 3, 10, 11, 20, 21, 28 and 29.
Claims 1-30 are pending.

Drawings

1. The proposed drawing corrections filed 5/18/2005 have been accepted by the Examiner. The corrections to the drawings will not be held in abeyance.

Claim Objections

2. Per claim **2**, the proposed typographic correction filed 5/18/2005 has been accepted by the Examiner. Correction of the claim language will not be held in abeyance.

Response to Arguments

3. Applicant's arguments, see Remarks pages 10-11, filed 5/18/2005, with respect to the rejection of claims 1-10 and 21-28 under 35 USC 102(e) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of *Beach et al* (USPN 6,728,713) and *Kumbalimutt et al* (USPN 6,871,346).

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless --
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claims **1-6, 9, 21-25 and 28** are rejected under 35 U.S.C. 102(e) as being anticipated by *Beach et al* (USPN 6,728,713).

a. **Per claim 1**, *Beach et al* teach the method of schema replication in a directory server, comprising:

- updating a schema at a replication supplier (col.5 lines 51-65, col.7 line 52-col.8 line 3);
- computing a change sequence number (col.6 lines 53-56);
- placing the change sequence number in an attribute on the replication supplier (col.6 lines 53-56);
- initiating a replication session to a replication consumer (col.5 lines 34-37);
- reading the change sequence number on the replication consumer (col.7 lines 11-18);
- updating the schema on the replication consumer to obtain a schema update if the change sequence number on the replication consumer is less than the change sequence number on the replication supplier (col.6 line 49-col.7 line 18); and
- propagating a schema update from the replication supplier to each replication consumer (col.6 lines 49-57, col.7 lines 11-18, col.8 lines 5-26, col.10 lines 1-4),
- wherein the schema is a set of rules to constrain what is stored in the directory server and the schema comprises a schema entry associated with an attribute and

an object class in the schema, wherein the schema entry comprises a private field describing a human readable description of the attribute and the object class (col.5 lines 38-61).

b. **Claims 21 and 28** contain limitations that are substantially equivalent to claim 1 and are therefore rejected under the same basis.

c. **Per claim 2,** *Beach et al* teach the method of claim 1, further comprising: replacing contents of a schema entry on each replication consumer with contents of a schema entry on the replication supplier (col.6 lines 22-48, col.7 lines 11-44).

d. **Per claim 3,** *Beach et al* teach the method of claim 2, wherein contents are replaced using an update operation on the schema entry (col.5 lines 51-65, col.6 lines 22-48, col.7 lines 11-44, col.7 line 52-col.8 line 3).

e. **Claim 22** is substantially equivalent to claim 3 and is therefore rejected under the same basis.

f. **Per claim 4,** *Beach et al* teach the method of claim 1, further comprising: maintaining the schema on a master supplier server (col.4 line 38-col.5 line 57, col.6 lines 22-48).

g. **Claim 23** is substantially equivalent to claim 4 and is therefore rejected under the same basis.

h. **Per claim 5,** *Beach et al* teach the method of claim 4, further comprising: copying the schema to a plurality of servers after updating the master supplier (col.4 line 38-col.5 line 23, col.6 lines 22-48).

i. **Claim 24** is substantially equivalent to claim 5 and is therefore rejected under the same basis.

j. **Per claim 6,** *Beach et al* teach the method of claim 1, further comprising: holding the change sequence number on the replication consumer in an attribute (col.5 lines 43-51, col.6 lines 49-56, col.7 lines 11-18).

k. **Claim 25** is substantially equivalent to claim 6 and is therefore rejected under the same basis.

l. **Claim 9** is substantially similar to claims 4 and 5 and is therefore rejected under the same basis.

6. Claims **11-20, 29 and 30** are rejected under 35 U.S.C. 102(e) as being anticipated by *Kumbalimutt et al* (USPN 6,871,346).

a. **Per claim 11,** *Kumbalimutt et al* teach the method of defining a schema in a directory server, comprising:

- identifying an object class in the schema (col.22 line 61-col.23 line 11,col.24 line 55-col.25 line 21, col.28 lines 33-50);
- placing the object class on an entry (col.26 lines 6-15);
- storing a data element in an attribute in the directory server used by the schema (col.24 lines 1-12);
- extending the schema with a new object class and a new attribute (col.24 lines 1-37, col.29 lines 48-52);
- describing a document with a private field of a schema entry comprising a human readable description of the new object class and the new attribute (col.23 lines 56-67, col.24 lines 35-54); and

- representing the data element as an attribute-data pair (col.24 line 58-63, col.25 lines 6-9 and 53-67).

b. **Claim 29** contains limitations that are substantially equivalent to claim 11 and is therefore rejected under the same basis.

c. **Per claim 12,** *Kumbalimutt et al* teach the method of claim 11, further comprising: defining the object class in the directory server (col.22 line 61-col.23 line 11, col.23 lines 56-67, col.25 lines 53-67, col.37 lines 33-34); storing the object class in the directory server (col.23 lines 22-67, col.26 lines 8-15, col.37 line 33-36); and maintaining integrity of the data element stored in the directory server is by imposing constraints on data values (col.25 lines 33-67, col.28 lines 50-67, col.37 line 33-col.38 line 67).

d. **Claim 20** contains limitations that are substantially equivalent to claims 11 and 12 and is therefore rejected under the same basis.

e. **Claim 30** is substantially equivalent to claim 12 and therefore rejected under the same basis.

f. **Per claim 13,** *Kumbalimutt et al* teach the method of claim 11, wherein the object class defines allowed attribute types and required attribute types (col.24 lines 35-65, col.25 lines 53-67, col.28 lines 33-40, col.37 lines 33-36).

g. **Per claim 14,** *Kumbalimutt et al* teach the method of claim 11, wherein the attribute is multi-valued (col.25 lines 58-59).

h. **Per claim 15,** *Kumbalimutt et al* teach the method of claim 11, wherein the attribute is single-valued (col.25 lines 57-58).

i. **Per claim 16,** *Kumbalimutt et al* teach the method of claim 11, wherein the private field is a human-readable description (col.23 lines 56-67, col.24 lines 35-54).

j. **Per claim 17,** *Kumbalimutt et al* teach the method of claim 11, wherein the attribute-data pair comprises a descriptive attribute associated with a data element (col.24 line 58-63, col.25 lines 6-9 and 53-67).

k. **Per claim 18,** *Kumbalimutt et al* teach the method of claim 11, wherein the entry in the directory server is customizable (col.24 lines 1-65, col.26 lines 8-15).

l. **Per claim 19,** *Kumbalimutt et al* teach the method of claim 11, wherein the attribute available for the entry in the directory server is customizable (col.24 lines 1-65, col.25 line 53-col.26 line 15, col.28 lines 3-40).

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

8. Claims **7, 8, 10, 26 are 27** are rejected under 35 U.S.C. 103(a) as being unpatentable over *Beach et al* (USPN 6,728,713) in view of *Kumbalimutt et al* (USPN 6,871,346).

a. **Per claim 10**, *Beach et al* teach the method of schema replication in a directory server, comprising:

- updating a schema at a replication supplier (col.5 lines 51-65, col.7 line 52-col.8 line 3);

- computing a change sequence number (col.6 lines 53-56);
- placing the change sequence number in an attribute on the replication supplier (col.6 lines 53-56);
- initiating a replication session to a replication consumer (col.5 lines 34-37, col.6 lines 22-48);
- reading the change sequence number on the replication consumer (col.7 lines 11-18);
- updating the schema on the replication consumer to obtain a schema update if the change sequence number on the replication consumer is less than the change sequence number on the replication supplier (col.6 line 49-56-col.7 line 18);
- propagating the schema update from the replication supplier to each replication consumer (col.4 lines 38-46, col.6 lines 22-57, col.7 lines 11-18, col.8 lines 5-26, col.10 lines 1-4);
- replacing content of a schema entry on each replication consumer with contents of a schema entry on the replication supplier (col.6 lines 22-48, col.7 lines 11-44);
- maintaining the schema on a master supplier server (col.4 line 38-col.5 line 57, col.6 lines 22-48);
- copying the schema to a plurality of servers after updating the master supplier (col.4 line 38-col.5 line 23, col.6 lines 22-48);
- holding the change sequence number on the replication consumer in an attribute (col.5 lines 43-51, col.6 lines 49-56, col.7 lines 11-18);
- wherein the schema is a set of rules to constrain what is stored in the directory server and the schema comprises a schema entry associated with an attribute and an object class in the schema, wherein the schema entry comprises a private field describing a human readable description of the attribute and the object class (col.5 lines 38-61).

Yet *Beach et al* fail to explicitly teach querying the schema with standard Lightweight Directory Access Protocol operations and modifying the schema with standard Lightweight Directory Access Protocol operations. However, *Kumbalimutt et al* disclose use of

the Lightweight Directory Access Protocol (LDAP) operations for managing, extending and modifying a schema (col.24 lines 13-65).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the teachings of *Beach et al* and *Kumbalimutt et al* for the purpose of implementing the LDAP operations, because LDAP is a well-known protocol useful for accessing data in on-line directories and directory servers. LDAP defines a relatively simple protocol for updating and searching directories running over TCP/IP, thus it would be obvious to use LDAP operations for modifying and accessing a schema in a directory.

b. **Claims 7, 8, 26 and 27** are substantially similar to claim 10 and are therefore rejected under the same basis.

Conclusion

9. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure: *Bernhardt et al* (USPN 6,792,462), *Mullins* (USPN 5,857,197), *Ng et al* (USPN 6,385,618), *Folk-Williams et al* (USPN 6,834,287), *Ponte* (USPN 6,826,559), *Kidder et al* (USPN 6,880,086).

10. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kristie Shingles whose telephone number is 571-272-3888. The examiner can normally be reached on Monday-Friday 8:30-6:00.

. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rupal Dharia can be reached on 571-272-3880. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Kristie Shingles
Examiner
Art Unit 2141

kds

RUPAL DHARIA
SUPERVISORY PATENT EXAMINER